

## Education

- 2017 - present    **Assistant Professor**  
Emergency Medicine, School of Medicine  
Graduate Group in Epidemiology  
Graduate Group in Public Health Sciences  
University of California, Davis
- 2016 - 2017    **Postdoctoral Scholar**  
Epidemiology, School of Public Health  
University of California, Berkeley  
K99, National Institute on Drug Abuse
- 2014 - 2016    **Health and Society Scholar**  
Robert Wood Johnson Foundation  
University of California, San Francisco  
University of California, Berkeley  
Advisors: Jennifer Ahern, Maria Glymour, Mark van der Laan
- 2014    **Postdoctoral Fellow**  
Department of Mental Health  
Johns Hopkins School of Public Health, Baltimore, MD  
Drug Dependence and Epidemiology  
Advisor: Elizabeth Stuart
- 2010-2014    **Ph.D. Epidemiology**  
Johns Hopkins University, Bloomberg School of Public Health  
Concentration in Methods  
Advisor: Thomas Glass  
Thesis: Mental health in context: effect heterogeneity and mechanism in the relationship between neighborhood disadvantage and adolescent depression and anxiety.
- 2012-2013    **M.H.S. Biostatistics**  
Johns Hopkins University, Bloomberg School of Public Health  
Advisor: Elizabeth Stuart  
Thesis: Implementation of methods to estimate population marginal treatment effects in the presence of non-randomized treatment assignment and informative selection from a population-based sample.
- 2007-2008    **M.P.H.**  
Johns Hopkins University, Bloomberg School of Public Health  
Capstone: Evaluation design for a study using community health workers to improve breastfeeding rates among adolescent African American women in East Baltimore.
- 2006    Graduate course in biostatistics  
University of Pennsylvania
- 2001-2005    **B.S. Biochemistry**  
University of Michigan  
Highest honors  
Thesis: Actin-regulatory proteins  $p116^{RIP}$  and *LIMK2* interact with POSH.

## Publications

### Published

- [1] K. E. Rudolph, G. D. E. D. Paksarian, R. Crowder, K. R. Merikangas, and E. A. Stuart, “Causal mediation analysis with observational data: considerations and illustration examining mechanisms linking neighborhood poverty to adolescent substance use.,” *American Journal of Epidemiology*, In press, 2018.
- [2] K. E. Rudolph, O. Sofrygin, N. M. Schmidt, R. Crowder, M. M. Glymour, J. Ahern, and T. L. Osypuk, “Mediation of neighborhood effects on adolescent substance use by the school and peer environments,” *Epidemiology*, vol. 29, no. 4, pp. 590–598, 2018.
- [3] K. E. Rudolph, N. M. Schmidt, R. Crowder, J. Galin, M. M. Glymour, J. Ahern, and T. L. Osypuk, “Composition or context: using transportability to understand drivers of site differences in a large-scale housing experiment,” *Epidemiology*, vol. 29, no. 2, pp. 199–206, 2018.
- [4] K. E. Rudolph and E. A. Stuart, “Using sensitivity analyses for unobserved confounding to address covariate measurement error in propensity score methods,” *American Journal of Epidemiology*, vol. 187, no. 3, pp. 604–613, 2018.
- [5] J. Ahern, E. C. Matthay, D. E. Goin, K. Farkas, and K. E. Rudolph, “Spikes in community violence increase deaths and hospital visits due to stress-responsive diseases,” *Epidemiology*, vol. 29, no. 5, pp. 684–691, 2018.
- [6] E. C. Matthay, K. E. Rudolph, D. E. Goin, K. Farkas, J. Skeem, and J. Ahern, “Within-community variation in violence and risk of self-harm in california: a population-based case-crossover study,” *Epidemiology*, In Press, 2018.
- [7] R. Kagawa, M. Cerda, K. Rudolph, V. Pear, K. Keyes, and G. Wintemute, “Firearm involvement in violent victimization and mental health,” *Annals of Internal Medicine*, In Press, 2018.
- [8] J. M. Torres, K. E. Rudolph, O. Sofrygin, M. M. Glymour, and R. Wong, “Longitudinal associations between having an adult child migrant and depressive symptoms among older adults in the mexican health and aging study,” *International journal of epidemiology*, vol. 47, no. 5, pp. 1432–1442, 2018.
- [9] J. M. Torres, K. E. Rudolph, O. Sofrygin, L. Walter, M. Glymour, and R. Wong, “Targeted estimation of associations between having an adult child in the us, physical functioning, and unmet needs for care among older mexican adults,” *Epidemiology*, In Press, 2018.
- [10] R. L. O’Brien, T. Neman, K. Rudolph, J. Casey, and A. Venkataramani, “Prenatal exposure to air pollution and intergenerational economic mobility: evidence from us county birth cohorts,” *Social Science & Medicine*, vol. 217, pp. 92–96, 2018.
- [11] D. E. Goin, K. E. Rudolph, and J. Ahern, “Predictors of community firearm violence.,” *Health and Place*, vol. 51, pp. 61–67, 2018.

- [12] R. M. Kagawa, A. Castillo-Carniglia, J. S. Vernick, D. Webster, C. Crifasi, K. E. Rudolph, M. Cerdá, A. Shev, and G. J. Wintemute, “Repeal of comprehensive background check policies and firearm homicide and suicide,” *Epidemiology*, vol. 29, no. 4, pp. 494–502, 2018.
- [13] N. Diamond-Smith and K. Rudolph, “The association between uneven sex ratios and violence: evidence from 6 asian countries,” *PloS one*, vol. 13, no. 6, e0197516, 2018.
- [14] K. Georgiades, D. Paksarian, K. E. Rudolph, and K. R. Merikangas, “Prevalence of mental disorder and service use by immigrant generation and race/ethnicity among us adolescents,” *Journal of the American Academy of Child & Adolescent Psychiatry*, vol. 57, no. 4, pp. 280–287, 2018.
- [15] E. C. Matthay, J. Galin, K. Farkas, K. Rudolph, G. Wintemute, and J. Ahern, “Associations between gun shows and firearm deaths and injuries (response to comments),” *Annals of internal medicine*, vol. 169, no. 1, pp. 66–66, 2018.
- [16] K. E. Rudolph, O. Sofrygin, W. Zheng, and M. J. van der Laan, “Robust and flexible estimation of data-dependent stochastic mediation effects: a proposed method and example in a randomized trial setting,” *Epidemiologic Methods*, In Press, 2017.
- [17] K. E. Rudolph and M. J. van der Laan, “Robust estimation of encouragement-design intervention effects transported across sites,” *Journal of the Royal Statistical Society Series B Statistical Methodology*, vol. 79, no. 5, pp. 1509–1525, 2017.
- [18] E. C. Matthay, J. Galin, K. E. Rudolph, K. Farkas, G. J. Wintemute, and J. Ahern, “In-state and interstate associations between gun shows and firearm deaths and injuries: a quasi-experimental study,” *Annals of internal medicine*, vol. 167, no. 12, pp. 837–844, 2017.
- [19] A. Vable, M. Kiang, S. Basu, K. Rudolph, I. Kawachi, S. Subramanian, and M. Glymour, “Military service, childhood socioeconomic status, and late life lung function: korean war era military service associated with smaller disparities,” *Military Medicine*, In Press, 2017.
- [20] D. E. Goin, K. E. Rudolph, and J. Ahern, “Drought and crime in california,” *Plos ONE*, vol. 12, no. 10, e0185629, 2017.
- [21] H. Hong, K. E. Rudolph, and E. A. Stuart, “Bayesian approach for addressing differential covariate measurement error in propensity score methods,” *Psychometrika*, vol. 82, no. 4, pp. 1078–1096, 2017.
- [22] Y. Webb-Vargas, K. E. Rudolph, D. Lenis, P. Murakami, and E. A. Stuart, “An imputation-based solution to using mismeasured covariates in propensity score analysis,” *Statistical Methods in Medical Research*, vol. 26, no. 4, pp. 1824–1837, 2017.
- [23] K. E. Rudolph, K. Colson, E. A. Stuart, and J. Ahern, “Optimally combining propensity score subclasses,” *Statistics in Medicine*, vol. 35, no. 27, pp. 4937–4947, 2016.
- [24] K. E. Rudolph, B. N. Sánchez, E. A. Stuart, B. Greenberg, K. Fujishiro, G. S. Wand, S. Shrager, T. Seeman, A. V. D. Roux, and S. H. Golden, “Job strain and the cortisol diurnal cycle in mesa: accounting for between-and within-day variability,” *American journal of epidemiology*, vol. 183, no. 5, pp. 497–506, 2016.
- [25] M. M. Glymour and K. E. Rudolph, “Causal inference challenges in social epidemiology: bias, specificity, and imagination,” *Social Science & Medicine*, vol. 166, no. 5, pp. 258–265, 2016.

- [26] K. E. Colson, K. E. Rudolph, S. C. Zimmerman, D. E. Goin, E. A. Stuart, M. van der Laan, and J. Ahern, “Optimizing matching and analysis combinations for estimating causal effects,” *Scientific reports*, vol. 6, 2016.
- [27] J. A. Casey, P. James, K. E. Rudolph, C.-D. Wu, and B. S. Schwartz, “Greenness and birth outcomes in a range of pennsylvania communities,” *International journal of environmental research and public health*, vol. 13, no. 3, p. 311, 2016.
- [28] J. M. Torres, C Alcantara, K. E. Rudolph, and E. A. Viruell-Fuentes, “Cross-border ties as sources of risk and resilience: do cross-border ties moderate the relationship between immigration-related stress and psychological distress for latino migrants in the us?” *Journal of health and social behavior*, vol. 57, no. 4, pp. 436–452, 2016.
- [29] K. E. Rudolph and W. W. Eaton, “Previous anxiety and depression as risk factors for early labour force exit,” *Journal of Epidemiology and Community Health*, vol. 70, no. 4, pp. 390–395, 2016.
- [30] K. E. Rudolph, E. A. Stuart, J. S. Vernick, and D. W. Webster, “Association between connecticut’s permit-to-purchase handgun law and homicides,” *American Journal of Public Health*, vol. 105, no. 8, e49 –54, 2015.
- [31] D. Paksarian, K. E. Rudolph, J. P. He, and K. R. Merikangas, “School start time and adolescent sleep patterns: results from the u.s. national comorbidity surveyadolescent supplement,” *American Journal of Public Health*, vol. 105, no. 7, pp. 1351 –1357, 2015.
- [32] B. Hadley, K. E. Rudolph, M. Mogul, and D. F. Perry, “Providing home visiting to high-risk pregnant and postpartum families: the development and evaluation of the momobile program,” *Zero to Three*, vol. 35, no. 2, 40 –48, 2014.
- [33] K. E. Rudolph, I. Diaz, M. Rosenblum, and E. A. Stuart, “Estimating population treatment effects from a survey sub-sample,” *American Journal of Epidemiology*, vol. 180, no. 7, pp. 737–748, 2014.
- [34] K. E. Rudolph, E. A. Stuart, T. A. Glass, and K. R. Merikangas, “Neighborhood disadvantage in context: the influence of urbanicity on the association between neighborhood disadvantage and adolescent emotional disorders,” *Social Psychiatry and Psychiatric Epidemiology*, vol. 49, no. 3, pp. 467–475, 2014.
- [35] K. E. Rudolph, W. Gary S, E. A. Stuart, T. A. Glass, A. H. Marques, R. Duncko, and K. R. Merikangas, “The association between cortisol and neighborhood disadvantage in a us population-based sample of adolescents,” *Health & Place*, vol. 25, pp. 68–77, 2014.
- [36] K. E. Rudolph, J. Lessler, R. M. Moloney, B. Kmush, and D. A. Cummings, “Incubation periods of mosquito-borne viral infections: a systematic review,” *The American Journal of Tropical Medicine and Hygiene*, vol. 90, no. 5, pp. 882–891, 2014.
- [37] K. E. Rudolph, T. A. Glass, R. M. Crum, and B. S. Schwartz, “Neighborhood psychosocial hazards and binge drinking among late middle-aged adults,” *Journal of Urban Health*, vol. 90, no. 5, pp. 970–982, 2013.

- [38] R. M. Lee, J. Lessler, R. A. Lee, K. E. Rudolph, N. G. Reich, T. M. Perl, and D. A. Cummings, “Incubation periods of viral gastroenteritis: a systematic review,” *BMC Infectious Diseases*, vol. 13, no. 1, p. 446, 2013.
- [39] A. S. Azman, K. E. Rudolph, D. A. Cummings, and J. Lessler, “The incubation period of cholera: a systematic review,” *Journal of Infection*, vol. 66, no. 5, pp. 432–438, 2013.

### **Under Review**

- 40. Rudolph KE, Sofrygin O, van der Laan MJ. Complier stochastic direct effects: identification and robust estimation.
- 41. Rudolph KE, Paksarian D, Shev A, Merikangas KR, Mennitt DJ, James P, Casey JA. Environmental noise and sleep and mental health outcomes in a nationally-representative sample of U.S. adolescents.
- 42. Schmid, I, Rudolph KE, Nguyen T, Hong H, Seamans M, Ackerman B, Stuart EA. Comparing the performance of statistical methods that generalize effect estimates from randomized controlled trials to much larger target populations.
- 43. Kagawa RMC, Gary D, Wintemute GJ, Rudolph KE, Pear VA, Keyes K, Cerda M. Gun carrying and psychiatric disorders among adolescents in the United States.
- 44. Zimmerman S, Matthay EC, Rudolph KE, Goin DE, Farkas K, Rowe C, Ahern J. Californias Mental Health Services Act and mortality due to suicide, homicide, and acute effects of alcohol: A quasi-experimental study.
- 45. Farkas K, Matthay EC, Rudolph KE, Goin DE, Ahern J. Prevalence of mental and substance use disorders among legal intervention injury cases in California, 2005-2014.
- 46. Matthay EC, Farkas K, Rudolph KE, Zimmerman S, Barragan M, Goin DE, Ahern J. Association of the Operation Peacemaker Fellowship in Richmond, California with city-level firearm and nonfirearm homicide and assault: A quasi-experimental study
- 47. Ackerman B, Schmid I, Rudolph KE, Seamans M, Susukida R, Mojtabei R, Stuart EA. Implementing Statistical Methods for Generalizing Randomized Trial Findings to a Target Population.
- 48. Schleimer JP, Rivera-Aguirre A, Castillo-Carniglia A, Laqueur, HS, Rudolph KE, Suarez H, Ramrez J, Somoza M, Brasesco MV, Martins SS, Cerda M. Investigating how perceived availability and perceived risk of marijuana use relate to use of marijuana among adolescents in Chile, Argentina, and Uruguay over time.
- 49. Berkowitz SA, Rudolph KE, Basu S. Detecting anomalies among practice sites within multi-center trials: an application of transportability methods to the TOPCAT and ACCORD BP trials.

50. Torres JM, Sofrygin O, Rudolph KE, Wong R, Haan MN, Glymour MM. Having an adult child in the US and cognitive decline for middle-aged and older adults in Mexico: A prospective cohort study

## **Grants and Fellowships**

### **Current**

Mechanisms linking neighborhood poverty to problematic adolescent drug use (Rudolph)

Role on Project: Principal Investigator

Dates: March 15, 2018 – December 31, 2020

Funding Agency: National Institute on Drug Abuse; R00DA042127

Funding: \$745,872

Description: The major goals of this research are to: 1) advance understanding of how neighborhood and school act together to influence problematic drug use among adolescents, including how these mechanisms differ across adolescent subgroups and places, and 2) develop a flexible statistical method to predict intervention mechanism effects in new target populations, taking into account population composition.

The health and social consequences of national marijuana legalization (Cerdeira)

Role on Project: Co-Investigator

Dates: July 1, 2016 – June 30, 2020

Funding Agency: National Institute on Drug Abuse; R01DA040924

Funding: \$260,182

Description: This is a pre/post commercial and non-commercialization (regulation) of marijuana that compares changes in marijuana use, use of other drugs, and increased fatalities between intervention and control sites.

Antimicrobial Resistant E.coli before and after CA SB 27(ARES): A natural experiment (Tartoff)

Role on Project: Co-Investigator

Dates: May 9, 2017 – April 30, 2022

Funding Agency: National Institute of Environmental Health Sciences; R01AI130066

Funding: \$109,388

Description: The major goal of this project is to estimate the extent to which a statewide policy to reduce antibiotic use in livestock production affects antibiotic-resistant infections in humans. My responsibility will be to advise on the statistical design and analysis for one of the aims.

Preventing firearm violence: An evaluation of urban blight removal in high risk communities (Kagawa)

Role on Project: Co-Investigator

Dates: January 1, 2018 – December 31, 2019

Funding Agency: National Institute of Justice; 2017-IJ-CX-0021

Funding: \$351,523

Description: Longitudinal, observational study to identify the impact that demolishing or rehabili-

tating vacant and decaying buildings in urban areas has on firearm violence and other crimes and to examine the heterogeneity of effects by neighborhood and property type in order to estimate the context in which these property interventions may have the most impact on firearm violence and other crimes.

Causal mediation methods for studying mechanisms in mental health (Stuart)

Role on Project: Consultant

Dates: April 1, 2018 – March 31, 2022

Funding Agency: National Institute of Mental Health; R01MH115487

Funding: \$32,000

Description: The goals of the proposed project are to extend causal mediation methods to common data structures in mental health research, and to disseminate the existing and new methods to mental health researchers, including providing guidance to facilitate adoption and appropriate use.

## **Pending**

Effects of public transitional kindergarten on child maltreatment and maltreatment disparities in California (Ahern, Rudolph)

Role on Project: Co-Principal-Investigator

Dates: January 1, 2018 – December 31, 2020

Funding Agency: Robert Wood Johnson Foundation

Funding: \$383,162 (total)

Description: The goal of this project is to examine the effects of California's implementation of public transitional kindergarten on child maltreatment outcomes, and variations in the effects for important subgroups.

Generating evidence on school start time as a tool for reducing social disparities in health (Paksarian)

Role on Project: Co-Investigator

Dates: January 1, 2018 – December 31, 2020

Funding Agency: Robert Wood Johnson Foundation

Description: The goal of this project is to examine the effects of California's implementation of public transitional kindergarten on child maltreatment outcomes, and variations in the effects for important subgroups.

Examining the synergistic effects of cannabis and prescription opioid policies on chronic pain, opioid prescribing, and opioid overdose (Cerdeira, Martins)

Role on Project: Co-Investigator

Dates: January 1, 2018 – December 31, 2019

Funding Agency: National Institute on Drug Abuse

Funding: \$94,847

Description: The goal of this project is to examine the extent to which various measures of opioid use, abuse, overdose, and disorders are affected by the enactment of more restrictive prescription opioid policies and less restrictive cannabis laws.

Community violence and disparities in maternal and infant health: impacts and mechanisms (Ahern)

Role on Project: Co-Investigator

Dates: July 1, 2018 – June 30, 2023

Funding Agency: National Institute of Child Health and Human Development

Funding: \$3,728,613 (total)

Description: The major goal of this project is to determine the effects of chronic and acute aspects of community violence on maternal and infant health and racial/ethnic health disparities, and to identify underlying psychological, behavioral and biological mechanisms of effect using statewide data for California on over 6 million mothers and infants over more than a decade.

### **Completed Fellowships and Grants**

Mechanisms underlying differential effects of neighborhood poverty on problematic adolescent drug use (Rudolph)

Role on Project: Principal Investigator

Dates: August 1, 2016 – November 30, 2017

Funding Agency: National Institute on Drug Abuse; K99DA042127

Funding: \$308,828

Description: The major goals of this research are to: 1) advance understanding of how neighborhood and school act together to influence problematic drug use among adolescents, including how these mechanisms differ across adolescent subgroups and places, and 2) develop a flexible statistical method to predict intervention mechanism effects in new target populations, taking into account population composition.

Robert Wood Johnson Foundation Health & Society Scholar

Dates: September 1, 2014 – July 31, 2016

Funding Agency: Robert Wood Johnson Foundation

Site: University of California, San Francisco and University of California, Berkeley

Drug Dependence Epidemiology Training Fellow

Dates: February 16, 2014 – August 31, 2014

Funding Agency: National Institute on Drug Abuse

Site: Johns Hopkins University, Bloomberg School of Public Health, Department of Mental Health

Sommer Scholar

Dates: September 1, 2012 – February 15, 2014

Funding Agency: Johns Hopkins University, Bloomberg School of Public Health

Site: Johns Hopkins University, Bloomberg School of Public Health, Department of Epidemiology

Intramural Research Training Award Fellow

Dates: September 1, 2010 – August 31, 2012

Funding Agency: National Institute of Mental Health

Site: Johns Hopkins University, Bloomberg School of Public Health, Department of Epidemiology



## Awards

2018	Lilienfeld Postdoctoral Paper Award—Society for Epidemiologic Research
2017	Faculty Scholar, Center for the Advancement of Multicultural Perspectives on Science, University of California, Davis
2014	Student Paper Award—American Statistical Association, Social Statistics/Government/ Survey Research Methods Sections
2008	Delta Omega Honor Society—Johns Hopkins School of Public Health

### **Presentations and Posters (first author only)**

- 2018 Rudolph KE, Sofrygin O, van der Laan MJ. Estimation of direct effects in an instrumental variable setting: a proposed method and example estimating effects of a randomized housing trial on adolescent substance use. Oral presentation at the Society for Epidemiologic Research Conference, Baltimore, MD.
- 2017 Rudolph KE, Sofrygin O, van der Laan MJ. Robust and flexible estimation of stochastic mediation effects: a proposed method and example in a randomized trial setting. Oral presentation at the Society for Epidemiologic Research Conference, Seattle, WA.
- 2016 Rudolph KE. Understanding site differences in the effects of the Moving to Opportunity Study on adolescent outcomes. Oral presentation at the Joint Statistical Meetings, Chicago, IL.
- 2016 Rudolph, KE. Contextual drivers of firearm violence. Oral presentation at the Society for Epidemiologic Research Conference, Miami, FL.
- 2016 Rudolph KE. Understanding site differences in the effects of the Moving to Opportunity Study on adolescent outcomes. Oral presentation at the Robert Wood Johnson Foundation Health & Society Scholars Conference, New Orleans, LA.
- 2015 Rudolph KE. Transportability in Encouragement-Design Interventions. Oral presentation at the Robert Wood Johnson Foundation Health & Society Scholars Conference, Chapel Hill, NC.
- 2015 Rudolph KE, van der Laan MJ. Transportability in Encouragement-Design Interventions. Poster at the Society for Prevention Research Conference, Washington, DC.
- 2015 Rudolph KE, Sanchez BN, Stuart EA, Greenberg B, Fujishiro K, Wand GS, Shrager S, Seeman T, Diez Roux AV, Golden SH. Association between job strain and aspects of the cortisol diurnal cycle: the Multi-Ethnic Study of Atherosclerosis. Poster at the Society for Epidemiologic Research Conference, Denver, CO.
- 2014 Rudolph KE, Diaz I, Rosenblum M, Stuart EA. Estimating population treatment effects from a survey sub-sample. Oral presentation as part of topic-contributed session Fresh Perspectives in Causal Inference II at the Joint Statistical Meetings, Boston, MA.
- 2013 Rudolph KE, Wand GS, Stuart EA, Glass TA, Marques AH, Duncko R, Merikangas KR. The association between cortisol characteristics and neighborhood disadvantage in a population-based sample of U.S. adolescents. Poster at the Society for Epidemiologic Research Conference, Boston, MA.
- 2012 Rudolph KE, Stuart EA, Glass TA, Merikangas, KR. Using propensity score subclassification to examine the association between neighborhood disadvantage and adolescent mental health. Poster at the Society for Epidemiologic Research Conference, Minneapolis, MN.
- 2012 Rudolph KE, Glass TA, Schwartz BS. Neighborhood psychosocial hazards and binge drinking among older adults. Poster at the Society for Epidemiologic Research Conference, Minneapolis, MN.
- 2010 Rudolph K, Gabor V, Morgan R. Environmental supports and barriers to physical activity in D.C. childcare centers. Oral presentation at the Annual American Public Health Association Conference, Denver, CO.

## Invited Talks

- 2018 Bringing Context into Focus—Transportability Framework on the Effect of Housing, University of California, San Francisco, Symposium: Closing the Gap between Rigor and Relevance: Methodological Opportunities for Implementation Science to Address the HIV Epidemic, San Francisco, CA.
- 2018 Improving prediction of intervention effects across populations, Columbia Mailman School of Public Health, New York, NY.
- 2018 Improving prediction of intervention effects across populations, New York University School of Medicine, New York, NY.
- 2018 Improving prediction of intervention effects across populations, University of California, San Francisco, Department of Epidemiology and Biostatistics, San Francisco, CA.
- 2018 Firearm violence and policy evidence, Grand Rounds, UCSF Benioff Children’s Hospital, Oakland, CA.
- 2018 Improving prediction of intervention effects across populations, University of California, Berkeley School of Public Health, Berkeley, CA.
- 2017 Better neighborhoods are harmful? Examining effect heterogeneity and mediation to understand puzzling results of the Moving to Opportunity Experiment, University of California, Davis, Graduate Group in Epidemiology, Davis, CA.
- 2017 Better neighborhoods are harmful? Examining effect heterogeneity and mediation to understand puzzling results of the Moving to Opportunity Experiment, University of California, San Francisco, NIDA T32 Training Program in Substance Abuse Treatment and Services Research, San Francisco, CA.
- 2015 Guns, cities, and statistics: Accurate statistical methods to inform policies to prevent violence and risk behaviors, University of California, Davis, School of Medicine, Department of Emergency Medicine, Sacramento, CA.
- 2014 Neighborhood Disadvantage and Cortisol, Drexel School of Public Health, Department of Epidemiology and Biostatistics, Philadelphia, PA.

## Campus Talks

- 2017 Causal Mediation Analysis, University of California, Berkeley School of Public Health, Causal Inference II Course, Berkeley, CA.
- 2016 Synthetic control group approach for estimating policy effects, University of California, San Francisco, Methods for Evaluating Social Policy Effects on Health, San Francisco, CA.
- 2015 What works in Boston may not work in Los Angeles: Understanding site differences and generalizing effects from one site to another, University of California, Berkeley School of Education, the Berkeley Evaluation and Assessment Research Center, Berkeley, CA.
- 2015 Applying Targeted Maximum Likelihood Estimation, University of California, San Francisco, Doctoral Seminar in Epidemiology and Biostatistics, San Francisco, CA.
- 2015 Instrumental Variables, University of California, Berkeley School of Public Health, Advanced Epidemiology Seminar, Berkeley, CA.

## Selected Press

The following articles were associated with:

Rudolph KE, Stuart EA, Vernick JS, Webster DW. Association between Connecticut's permit-to-purchase handgun law and homicides. *Am J Public Health*. 2015; 105(8):e49-54.

- The Washington Post: <http://www.washingtonpost.com/blogs/govbeat/wp/2015/06/12/gun-killings-fell-by-40-percent-after-connecticut-passed-this-law/>
- The New Yorker: <http://www.newyorker.com/news/daily-comment/an-honest-comedian-on-guns?intcid=mod-latest>
- CNN: <http://www.cnn.com/2015/06/12/us/gun-law-homicide-drop/>
- Newsweek: <http://www.newsweek.com/handgun-law-connecticut-helped-decrease-gun-homicides-342363>
- U.S. News and World Report: <http://health.usnews.com/health-news/articles/2015/06/11/tough-handgun-law-linked-to-lower-gun-related-murder-rate-in-connecticut>
- Reddit's front page: [http://www.reddit.com/r/science/comments/39pazx/connecticuts\\_permit\\_to\\_purchase\\_law\\_in\\_effect\\_for/](http://www.reddit.com/r/science/comments/39pazx/connecticuts_permit_to_purchase_law_in_effect_for/)
- The Baltimore Sun: <http://www.baltimoresun.com/news/opinion/readersrespond/bs-ed-\handgun-licensing-20150611-story.html> and <http://www.baltimoresun.com/news/maryland/politics/blog/bs-md-van-hollen-gun-20150611-story.html>
- San Francisco Chronicle: <http://www.sfgate.com/news/article/Connecticut-gun-permit-law-prompts-federal-6321880.php>
- Philadelphia Inquirer: <http://www.philly.com/philly/blogs/attytood/And-then-theres-guns.html>
- WNPR: <http://wnpr.org/post/new-analysis-attempts-quantify-impact-handgun-regulations-state#stream/0>

## Professional Experience

### Research

- 12/2017 - present    **Assistant Professor**  
Emergency Medicine, School of Medicine  
University of California, Davis
- 08/2016 - 11/2017    **Postdoctoral Scholar**  
Department of Epidemiology  
University of California, Berkeley  
K99 funded by NIDA
- 09/2014 - 07/2016    **Health and Society Scholar**  
Robert Wood Johnson Foundation  
University of California, San Francisco  
University of California, Berkeley
- 02/2014-08/2014    **Postdoctoral Fellow**  
Department of Mental Health  
Johns Hopkins School of Public Health, Baltimore, MD  
Drug Dependence and Epidemiology Training Program  
Advised by Dr. Elizabeth Stuart
- 04/2013-08/2014    **Statistical Consultant**  
Georgetown University, Washington, DC  
Center for Child and Human Development  
Partners for a Healthy Baby Evaluation
- 09/2012-01/2013    **Graduate research assistant** to Dr. Elizabeth Stuart  
Department of Mental Health  
Johns Hopkins School of Public Health, Baltimore, MD  
Developed conference material on statistical methods for missing data, developed material for Causal Inference course.
- 12/2010-06/2013    **Graduate research assistant** to Drs. Derek Cummings and Justin Lessler  
Department of Epidemiology  
Johns Hopkins School of Public Health, Baltimore, MD  
Performed systematic reviews of the incubation periods of multiple viruses.

## Teaching Experience

2017	Instructor - Epidemiology Journal Club for Doctoral Students Division of Epidemiology University of California, Berkeley School of Public Health, Berkeley, CA
2013	Teaching assistant - Spatial Analysis and GIS I Department of Biostatistics Johns Hopkins School of Public Health, Baltimore, MD
2013	Teaching assistant - Spatial Analysis and GIS II Department of Biostatistics Johns Hopkins School of Public Health, Baltimore, MD
2011-2013	Teaching assistant - Fundamentals of Epidemiology and Biostatistics Department of Epidemiology Johns Hopkins School of Public Health, Baltimore, MD
2012	Teaching assistant - Methodological Challenges in Epidemiological Research Department of Epidemiology Johns Hopkins School of Public Health, Baltimore, MD
2012	Teaching assistant - Doctoral Seminar in Epidemiology Department of Epidemiology Johns Hopkins School of Public Health, Baltimore, MD

**Non-Academic**

09/2010-12/2010

**Consultant**

Altarum Institute, Washington, DC

Designed program evaluations for the State of Michigan's Communities Putting Prevention to Work grant programs.

Conducted quantitative data analysis for several CDC-funded projects, including ACHIEVE and the State of Michigan's School Nutrition Standards grant program.

06/2008-08/2010

**Policy Associate**

Altarum Institute, Washington, DC

Project Management: Managed program evaluation projects contracted by the Health Resources and Services Administration (HRSA) of HHS.

Evaluation Design: Designed program evaluations for the Maternal and Child Health Bureaus Early Childhood Comprehensive Systems Initiative, Texas' Medicaid case management program, HRSA's Bureau of Health Professions' minority health professions grant program, and Michigan's Building Healthy Communities grant program.

Qualitative data analysis: Analyzed data obtained from focus groups, in-depth interviews, and data abstraction using NVivo qualitative analysis software.

Quantitative data analysis: Led teams in analysis of primary and secondary data using STATA and SAS statistical software.

Report writing: Co-authored several reports to HHS' Office of Women's Health, HRSA's Bureau of Health Professions and Bureau of Healthcare Systems, and the Maternal and Child Health Bureau.

08/2007-01/2008

**Intern**

Howard County Health Department, Columbia, MD

Developed policies for health care access program to provide affordable, comprehensive health care coverage for all Howard County residents.

01/2008

**Field Worker**

Johns Hopkins Center for American Indian Health, Albuquerque, NM

Field work as a Family Health Liaison for a teen mother health behavior intervention on Navajo and Apache reservations.

06/2005-06/2007

**Staff Scientist**

Merck & Co. Inc., West Point, PA

Supported demonstration and licensing of Varicella manufacturing facility.

Provided technical and biological support for Varicella processing.

Project and People Management: Led project to re-design sterility testing.

## Professional Activities

### Reviewer

2016-2018	Epidemiology
2014-2018	American Journal of Epidemiology
2014-2018	PLOS ONE
2015-2017	Social Science & Medicine
2015	Journal of Clinical Epidemiology
2015	Ethnicity and Health
2015	Epidemiology and Psychiatric Sciences
2014	Journal of Youth and Adolescence
2014	BMC Public Health
2014	Environment International
2013	Journal of Epidemiology and Community Health